

Sequence Listing

<110> Ashkenazi, Avi J.

Goddard, Audrey

Godowski, Paul

Gurney, Austin L.

Polakis, Paul

Williams, P. Mickey

Wood, William I.

Wu, Thomas D.

Zhang, Zemin

<120> COMPOSITIONS AND METHODS FOR THE DIAGNOSIS AND
TREATMENT OF TUMOR

<130> P5009R1

<150> 60/081,071

<151> 1998-04-07

<150> 60/085,697

<151> 1998-05-15

<150> 60/097,022

<151> 1998-08-18

<150> 60/101,922

<151> 1998-09-24

<150> 60/103,679

<151> 1998-10-08

<150> PCT/US99/05028

<151> 1999-03-08

<150> PCT/US99/12252

<151> 1999-06-02

<150> PCT/US99/20111

<151> 1999-09-01

<150> PCT/US99/28565

<151> 1999-12-02

<150> PCT/US00/04342

<151> 2000-02-18

<150> PCT/US00/04341

<151> 2000-02-18

<150> PCT/US00/05841

<151> 2000-03-02

<150> PCT/US00/08439

<151> 2000-03-30

<150> PCT/US00/14042

<151> 2000-05-22

<150> PCT/US00/23328

<151> 2000-08-24

<150> PCT/US00/32678

<151> 2000-12-01

<150> PCT/US01/06520

<151> 2001-02-28

<150> PCT/US01/17800

<151> 2001-06-01

<150> PCT/US01/19692

<151> 2001-06-20

<150> PCT/US01/21066

<151> 2001-06-29

<150> PCT/US01/21735

<151> 2001-07-09

<160> 10

<210> 1

<211> 537

<212> DNA

<213> Homo Sapien

<400> 1

taaaacagct acaatatcc agggccagtc acttgccatt tctcataaca 50

gcgtcagaga gaaagaactg actgaaacgt ttgagatgaa gaaagttctc 100
ctcctgatca cagccatctt ggccagtggt gttggttcc cagtctctca 150
agaccaggaa cgagaaaaaa gaagtatcag tgacagcgat gaattagctt 200
cagggttttt tgtgttccct taccatatac catttgcgcc acttccacca 250
attccatttc caagatttcc atggtttaga cgtaatttcc ctattccaat 300
acctgaatct gcccctacaa ctccccttcc tagcgaaaag taaacaagaa 350
ggataagtca cgataaacct ggtcacctga aattgaaatt gagccacttc 400
cttgaagaat caaaattcct gtttaataaaa gaaaaacaaa tgtaattgaa 450
atagcacaca gcattctcta gtcaatatct ttagtgatct tctttaataa 500
acatgaaagc aaagattttg gtttcttaat ttccaca 537

<210> 2

<211> 1257

<212> DNA

<213> Homo Sapien

<400> 2

ggagagaggg gcgcgggtga aaggcgcatg gatgcagcct gcggcggcct 50
cggagcgcgg cggagccaga cgctgaccac gttcctctcc tcggtctcct 100
ccgcctccag ctccgcgctg cccggcagcc gggagccatg cgaccccagg 150
gccccgccgc ctccccgcag cggctccgcg gctcctctgt gctcctgctg 200
ctgcagctgc ccgcgccgtc gagcgctct gagatcccca aggggaagca 250
aaaggcgag ctccggcaga gggaggtggt ggacctgtat aatggaatgt 300
gcttacaagg gccagcagga gtgcctggtc gagacgggag ccctggggcc 350
aatgttattc cgggtacacc tgggatccca ggtcgggatg gattcaaagg 400
agaaaagggg gaatgtctga gggaaagctt tgaggagtcc tggacacca 450
actacaagca gtgttcattg agttcattga attatggcat agatcttggg 500

aaaattgcgg agtgtacatt tacaaagatg cgttcaaata gtgctctaag 550
 agttttgttc agtggtcac ttcggctaaa atgcagaaat gcatgctgc 600
 agcgttggtta ttacacattc aatggagctg aatgttcagg acctcttccc 650
 attgaagcta taatttattt ggaccaagga agccctgaaa tgaattcaac 700
 aattaatatt catcgactt ctctgtgga aggactttgt gaaggaattg 750
 gtgctggatt agtggatgtt gctatctggg ttggcacttg ttcagattac 800
 ccaaaaggag atgcttctac tggatggaat tcagttctc gcatcattat 850
 tgaagaacta ccaaataaa tgcttaatt ttcatttgc acctctttt 900
 ttattatgcc ttggaatggt tcaactaaat gacatttta ataagttat 950
 gtatacatct gaatgaaaag caaagctaaa tatgtttaca gaccaaagt 1000
 tgattcaca ctgttttaa atctagcatt attcatttg ctccaatcaa 1050
 aagtggttc aatattttt ttagttggtt agaatactt ctcatagtc 1100
 acattctctc aacctataat ttggaatatt gttgtggtct ttgttttt 1150
 ctcttagtat agcattttta aaaaaatata aaagctacca atctttgtac 1200
 aatttgtaaa tgtaagaat ttttttata tctgttaaataaaaattatt 1250
 tccaaca 1257

<210> 3

<211> 1847

<212> DNA

<213> Homo Sapien

<400> 3

gccaggggaa gagggatgac cgacccgggg aaggtcgtg ggcagggcga 50
 gttgggaaag cggcagcccc cgccgcccc gcagccctt ctctcttt 100
 ctcccagtc ctatctgcct ctgctggag gccaggccgt gcagcatcga 150
 agacaggagg aactggagcc tcattggccg gccggggcg ccggcctcgg 200

gcttaaatag gagctccggg ctctggctgg gacccgaccg ctgccggccg 250
 cgctcccgt gctcctgccg ggtgatggaa aacccagcc cggccgccg 300
 cctgggcaag gccctctgcg ctctcctct ggccactctc ggcgccgccg 350
 gccagcctct tgggggagag tccatctgtt ccgccagagc cccggccaaa 400
 tacagcatca ccttcacggg caagtggagc cagacggcct tcccaagca 450
 gtacccctg ttccgcccc ctgcgcagtg gtcttcgctg ctgggggccg 500
 cgcatagctc cgactacagc atgtggagga agaaccagta cgtcagtaac 550
 gggctgcgcg actttgcgga gcgcggcgag gcctgggcgc tgatgaagga 600
 gatcgaggcg gcgggggagg cgctgcagag cgtgcacgag gtgttttcgg 650
 cgcccgccgt cccagcggc accgggcaga cgtcggcgga gctggaggtg 700
 cagcgcaggc actcgttgt ctcttttggt gtgcgcacg tgccagccc 750
 cgactggctc gtggcgctgg acagcctgga cctgtgcgac ggggaccgtt 800
 ggcggaaca ggcggcgctg gacctgtacc cctacgacgc cgggacggac 850
 agcggttca cctctctc cccaacttc gccaccatcc cgcaggacac 900
 ggtgaccgag ataacgtcct cctctcccag ccacccggcc aactccttct 950
 actaccgcg gctgaaggcc ctgcctccca tcgccagggt gacactgctg 1000
 cggtgcgac agagccccag ggccttcac cctcccgccc cagtcctgcc 1050
 cagcagggac aatgagattg tagacagcgc ctacgttcca gaaacgccgc 1100
 tggactgca ggtctccctg tggctgtcct ggggactgtg cggaggccac 1150
 tgtgggaggc tcgggaccaa gagcaggact cgctacgtcc ggtccagcc 1200
 cgccaacaac gggagcccct gccccagct cgaagaagag gctgagtgcg 1250
 tcctgataa ctgctctaa gaccagagcc ccgcagcccc tggggcccc 1300
 cggagccatg ggggtgcggg ggctcctgtg caggctcatg ctgcaggcgg 1350

ccgagggcac aggggggttc gcgctgctcc tgaccgcggt gaggccgcgc 1400
cgaccatctc tgcactgaag ggccctctgg tggccggcac gggcattggg 1450
aaacagcctc ctcctttccc aaccttgctt cttagggggcc cccgtgtccc 1500
gtctgctctc agcctcctcc tcctgcagga taaagtcac cccaaggctc 1550
cagctactct aaattatgtc tccttataag ttattgctgc tccaggagat 1600
tgtccttcat cgtccagggg cctggctccc acgtggtgc agatacctca 1650
gacctggtgc tctaggctgt gctgagccca ctctcccag ggcgcacca 1700
agcggggggcc acttgagaag tgaataaatg gggcgggttc ggaagcgta 1750
gtgtttccat gttatggatc tctctgcgtt tgaataaaga ctatctctgt 1800
tgctcacaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa 1847

<210> 4

<211> 4040

<212> DNA

<213> Homo Sapien

<400> 4

gaggaaccta ccggtaccgg ccgcgcgctg gtagtcgccg gtgtggctgc 50
acctcacaa tcccgctgcgc cgcggctggg ccgtcggaga gtgcgtgtgc 100
ttctctctg cacgcggtgc ttgggctcgg ccaggcgggg tccgccgcca 150
gggtttgagg atgggggagt agctacagga agcgaccccg cgatggcaag 200
gtatatattt gtggaatgaa aaggaagtat tagaaatgag ctgaagacca 250
ttcacagatt aatatatttg gggacagatt tgtgatgctt gattcacct 300
tgaagtaatg tagacagaag ttctcaaatt tgcattatc atcaactgga 350
accagcagtg aatcttaatg ttacttaaa tcagaacttg cataagaaag 400
agaatgggag tctgggttaa taaagatgac tatatcagag acttgaaaag 450
gatcattctc tgtttctga tagtgtatat ggccatttta gtgggcacag 500

atcaggattt ttacagtta cttggagtgt ccaaaactgc aagcagtaga 550
gaaataagac aagctttcaa gaaattggca ttgaagttac atcctgataa 600
aaacccgaat aacccaaatg cacatggcga tttttaaaa ataaatagag 650
catatgaagt actcaaagat gaagatctac ggaaaaagta tgacaaatat 700
ggagaaaagg gacttgagga taatcaaggt ggccagtatg aaagctggaa 750
ctattatcgt tatgatttg gtatttatga tgatgatcct gaaatcataa 800
cattggaaag aagagaattt gatgctgctg ttaattctgg agaactgtgg 850
tttgtaaatt ttactcccc aggctgttca cactgccatg atttagctcc 900
cacatggaga gactttgcta aagaagtgga tgggttactt cgaattggag 950
ctgttaactg tggatgatgat agaatgcttt gccgaatgaa aggagtcaac 1000
agctatccca gtctcttcat tttcggctct ggaatggccc cagtgaata 1050
tcatggagac agatcaaagg agagttagt gagttttgca atgcagcatg 1100
ttagaagtac agtgacagaa ctttgacag gaaattttgt caactccata 1150
caaactgctt ttgctgctgg tattggctgg ctgactactt ttgttcaaa 1200
aggaggagat tgtttgactt cacagacacg actcaggctt agtggcatgt 1250
tgtttctcaa ctcattggat gctaaagaaa tatatttga agtaatacat 1300
aatcttcag atttgaact acttcggca aacacactag aggatcgttt 1350
ggctcatcat cggctggctgt tatttttca ttttgaaaa aatgaaaatt 1400
caaatgatcc tgagctgaaa aaactaaaaa ctctacttaa aaatgatcat 1450
attcaagtg gcaggtttga ctgttctct gcaccagaca tctgtagtaa 1500
tctgtatgtt ttcagccgt ctctagcagt atttaaagga caaggaacca 1550
aagaatatga aattcatcat ggaaagaaga ttctatatga tatacttgcc 1600
tttgccaaag aaagtgtgaa ttctcatgtt accacgcttg gacctcaaaa 1650

ttttctgcc aatgacaaag aacctggct tgttgattc ttgccccct 1700
 ggtgtccacc atgtcgagct ttactaccag agttacgaag agcatcaaat 1750
 cttctttatg gtcagcttaa gtttggtaca ctagattgta cagttcatga 1800
 gggactctgt aacatgtata acattcaggc ttatccaaca acagtggat 1850
 tcaaccagtc caacattcat gagtatgaag gacatcactc tgctgaacaa 1900
 atcttgagat tcatagagga tcttatgaat ccttcagtgg tctcccttac 1950
 acccaccacc ttcaacgaac tagttacaca aagaaaacac aacgaagtct 2000
 ggatggttga ttctattct cegtgggtgc atccttgcca agtcttaatg 2050
 ccagaatgga aaagaatggc ccggacatta actggactga tcaacgtggg 2100
 cagtatagat tgccaacagt atcattcttt ttgtgccag gaaaacgttc 2150
 aaagataccc tgagataaga tttttcccc caaatcaaa taaagcttat 2200
 cagtatcaca gttacaatgg ttggaatagg gatgcttatt ccctgagaat 2250
 ctggggctca ggatttttac ctcaagtatc cacagatcta acacctcaga 2300
 ctttcagtga aaaagttcta caagggaata atcattgggt gattgattc 2350
 tatgctcctt ggtgtggacc ttgccagaat ttgtctccag aatttgagct 2400
 cttggctagg atgattaaag gaaaagtga agctggaaaa gtagactgtc 2450
 aggcttatgc tcagacatgc cagaaagctg ggatcagggc ctatccaact 2500
 gttaagtttt atttctacga aagagcaaag agaaattttc aagaagagca 2550
 gataaatacc agagatgcaa aagcaatcgc tgccttaata agtgaaaaat 2600
 tggaaactct ccgaaatcaa ggcaagagga ataaggatga actttgataa 2650
 tgttgaagat gaagaaaaag tttaaagaa attctgacag atgacatcag 2700
 aagacaccta ttagaatgt tacatttatg atgggaatga atgaacatta 2750
 tcttagactt gcagttgtac tgccagaatt atctacagca ctggtgtaaa 2800

agaaggtct gcaaactttt tctgtaaagg gccggtttat aaatatatta 2850
gactttgcag gctataatat atggttcaca catgagaaca agaataagagt 2900
calcatgtat tctttgttat ttgcttttaa caacctttaa aaaatattaa 2950
aacgattctt agctcagagc catacaaaag taggctggat tcagtccatg 3000
gaccatagat tgctgtcccc ctgcacggac ttataatgtt tcaggtggct 3050
ggcttgaaca tgagtctgct gtgctatcta cataaatgtc taagttgtat 3100
aaagtccact ttcccttcac gtttttggc tgacctgaaa agaggttaact 3150
tagtttttg tcactgttc tcctaaaaat gctatcccta accatatatt 3200
tatatttcgt tttaaaaaca cccatgatgt ggcacagtaa acaaaccctg 3250
ttatgtgta ttattatgag gagattcttc attgtttct ttccttctca 3300
aaggttgaaa aaatgctttt aattttcac agccgagaaa cagtcgagca 3350
gtatatgtgc acacagtaag tacacaaatt tgagcaacag taagtcaca 3400
aattctgtag ttgctgtat catccaggaa aacctgaggg aaaaaatta 3450
tagcaattaa ctgggcattg tagagtatcc taaatatgtt atcaagtatt 3500
tagagttcta taitttaaag atatatgtgt tcatgtatt tctgaaattg 3550
ctttcataga aattttccca ctgatagttg attttgagg catctaatat 3600
ttacatatt gccttctgaa ctttgtttg acctgatcc ttatttaca 3650
ttgggtttt ctttcatagt ttgggtttt cactcctgtc cagtctatt 3700
attattcaaa taggaaaaat tactttacag gttgtttac ttagcttat 3750
aatgatactg tagttattcc agttactagt ttactgtcag agggctgcct 3800
tttcagata aatattgaca taataactga agttatttt ataagaaaat 3850
caagtatata aatctaggaa agggatcttc tagtttctgt gttgtttaga 3900
ctcaaagaat cacaaattg tcagtaacat gtagtgttt agttataatt 3950

cagagtgtac agaatggtaa aaattccaat cagtcaaaag aggtcaatga 4000

attaaaaggc ttgcaacttt ttcaaaaaaa aaaaaaaaaa 4040

<210> 5

<211> 1915

<212> DNA

<213> Homo Sapien

<400> 5

ggcaacatgg ctacagcaggc ttgccccaga gccatggcaa agaatggact 50

tgtaatttgc atcctgggtga tcaccttact cctggaccag accaccagcc 100

acacatccag attaaaagcc aggaagcaca gcaaactcg agtgagagac 150

aaggatggag atctgaagac tcaaattgaa aagctctgga cagaagtcaa 200

tgccctgaag gaaattcaag ccctgcagac agtctgtctc cgaggcacta 250

aagttcaca gaaatgtac cttgcttcag aaggtttgaa gcatttccat 300

gaggccaatg aagactgcat ttccaaagga ggaatcctgg ttatccccag 350

gaactccgac gaaatcaacg ccctccaaga ctatggtaaa aggagcctgc 400

caggtgtcaa tgacttttgg ctgggcatca atgacatggt cacggaaggc 450

aagtttgttg acgtcaacgg aatcgctatc tcttctctca actgggaccg 500

tgcacagcct aacggtggca agcgagaaaa ctgtgtcctg ttctcccaat 550

cagctcaggg caagtggagt gatgaggcct gtcgcagcag caagagatac 600

atatgcgagt tcaccatccc taaataggtc ttctccaat gtgtctcca 650

agcaagattc atcataactt ataggttcat gatctctaag atcaagtaaa 700

aatcataatt ttacttatt aaaaaattgc aacacaagat caatgtccat 750

agcaatatga tagcatcagc caattttgct aacacatttc ttgggattt 800

tgcccttctt ggggtatagg ggatcagaaa tattgatcca tgtgcacgca 850

gataaaatgg cttctgctaa acagactaaa atctttctct ctagtctttc 900

tcactgtac aaaccagtt tgtttcaaa aaatcacagt agcaatgcaa 950
 ctcatcatic tagaaaagca agcttaggct acctgaaaga tttcccttg 1000
 gaagtttagc gtatgttga ctaacaaaaa ttcctacat cagagactet 1050
 aggtgctata taatccaaaa acttttcagc ctgttgctca ttctgtcca 1100
 tgctggcaat aatacctgt cagcccatta ccctatttt gaattgctcc 1150
 atctcctggt gggacttgta tctgtctgc catatcagaa cacaacccc 1200
 tgaagaggtt ctgatttgat tttttttt tctcatgcc taccctttt 1250
 ttggaagttt ccagccgcaa ttgaaatga aatgacaagg tgtatattg 1300
 atcaatttc attccacca ttgcattaca acctctaact taaatgggta 1350
 accctaaggc atatcaaga agcagattgc atgataaacg gaaatagaaa 1400
 aaaagaacct acatttattt tgcttagca tccttactct cacctttat 1450
 gagattgaga gtggacttac atttccttt ttacatttc gtatattat 1500
 ttttttagc catcattata tgttaagtc tattatgggc aaccaatctt 1550
 tggaaagtga aaactgaatt taaagaatgc tatcttgaa aattgcatac 1600
 gtctgtgcaa tttttattc tgcctagtgc tattctgctt gttaactag 1650
 attgtacaaa ataacttcat tgcttaatat caaattacaa agtttagact 1700
 tggagggaaa tgggctttt agaagcaaac aattttaa atattttgtt 1750
 cttcaataaa atagtgtta aacattgaat gtgtttgtg aacaatatcc 1800
 cacttgcaa actttaacta cacatgcttg gaattaagtt ttagctgtt 1850
 tcattgctca ataataaage ctgaattctg atcaataaaa aaaaaaaaaa 1900
 aaaaaaaaaa aaaaa 1915

<210> 6

<211> 85

<212> PRT

<213> Homo Sapien

<400> 6

Met Lys Lys Val Leu Leu Ile Thr Ala Ile Leu Ala Val Ala
1 5 10 15

Val Gly Phe Pro Val Ser Gln Asp Gln Glu Arg Glu Lys Arg Ser
20 25 30

Ile Ser Asp Ser Asp Glu Leu Ala Ser Gly Phe Phe Val Phe Pro
35 40 45

Tyr Pro Tyr Pro Phe Arg Pro Leu Pro Pro Ile Pro Phe Pro Arg
50 55 60

Phe Pro Trp Phe Arg Arg Asn Phe Pro Ile Pro Ile Pro Glu Ser
65 70 75

Ala Pro Thr Thr Pro Leu Pro Ser Glu Lys
80 85

<210> 7

<211> 243

<212> PRT

<213> Homo Sapien

<400> 7

Met Arg Pro Gln Gly Pro Ala Ala Ser Pro Gln Arg Leu Arg Gly
1 5 10 15

Leu Leu Leu Leu Leu Leu Gln Leu Pro Ala Pro Ser Ser Ala
20 25 30

Ser Glu Ile Pro Lys Gly Lys Gln Lys Ala Gln Leu Arg Gln Arg
35 40 45

Glu Val Val Asp Leu Tyr Asn Gly Met Cys Leu Gln Gly Pro Ala
50 55 60

Gly Val Pro Gly Arg Asp Gly Ser Pro Gly Ala Asn Val Ile Pro
65 70 75

Gly Thr Pro Gly Ile Pro Gly Arg Asp Gly Phe Lys Gly Glu Lys
80 85 90

Gly Glu Cys Leu Arg Glu Ser Phe Glu Glu Ser Trp Thr Pro Asn
95 100 105

Tyr Lys Gln Cys Ser Trp Ser Ser Leu Asn Tyr Gly Ile Asp Leu
110 115 120

Gly Lys Ile Ala Glu Cys Thr Phe Thr Lys Met Arg Ser Asn Ser
125 130 135

Ala Leu Arg Val Leu Phe Ser Gly Ser Leu Arg Leu Lys Cys Arg
140 145 150

Asn Ala Cys Cys Gln Arg Trp Tyr Phe Thr Phe Asn Gly Ala Glu
155 160 165

Cys Ser Gly Pro Leu Pro Ile Glu Ala Ile Ile Tyr Leu Asp Gln
170 175 180

Gly Ser Pro Glu Met Asn Ser Thr Ile Asn Ile His Arg Thr Ser
185 190 195

Ser Val Glu Gly Leu Cys Glu Gly Ile Gly Ala Gly Leu Val Asp
200 205 210

Val Ala Ile Trp Val Gly Thr Cys Ser Asp Tyr Pro Lys Gly Asp
215 220 225

Ala Ser Thr Gly Trp Asn Ser Val Ser Arg Ile Ile Ile Glu Glu
230 235 240

Leu Pro Lys

<210> 8

<211> 331

<212> PRT

<213> Homo Sapien

<400> 8

Met Glu Asn Pro Ser Pro Ala Ala Ala Leu Gly Lys Ala Leu Cys
1 5 10 15

Ala Leu Leu Leu Ala Thr Leu Gly Ala Ala Gly Gln Pro Leu Gly
20 25 30

Gly Glu Ser Ile Cys Ser Ala Arg Ala Pro Ala Lys Tyr Ser Ile
35 40 45

Thr Phe Thr Gly Lys Trp Ser Gln Thr Ala Phe Pro Lys Gln Tyr
50 55 60

Pro Leu Phe Arg Pro Pro Ala Gln Trp Ser Ser Leu Leu Gly Ala
65 70 75

Ala His Ser Ser Asp Tyr Ser Met Trp Arg Lys Asn Gln Tyr Val
80 85 90

Ser Asn Gly Leu Arg Asp Phe Ala Glu Arg Gly Glu Ala Trp Ala
95 100 105

Leu Met Lys Glu Ile Glu Ala Ala Gly Glu Ala Leu Gln Ser Val
110 115 120

His Glu Val Phe Ser Ala Pro Ala Val Pro Ser Gly Thr Gly Gln
125 130 135

Thr Ser Ala Glu Leu Glu Val Gln Arg Arg His Ser Leu Val Ser
140 145 150

Phe Val Val Arg Ile Val Pro Ser Pro Asp Trp Phe Val Gly Val
155 160 165

Asp Ser Leu Asp Leu Cys Asp Gly Asp Arg Trp Arg Glu Gln Ala
170 175 180

Ala Leu Asp Leu Tyr Pro Tyr Asp Ala Gly Thr Asp Ser Gly Phe
185 190 195

Thr Phe Ser Ser Pro Asn Phe Ala Thr Ile Pro Gln Asp Thr Val
200 205 210

Thr Glu Ile Thr Ser Ser Ser Pro Ser His Pro Ala Asn Ser Phe
215 220 225

Tyr Tyr Pro Arg Leu Lys Ala Leu Pro Pro Ile Ala Arg Val Thr
230 235 240

Leu Leu Arg Leu Arg Gln Ser Pro Arg Ala Phe Ile Pro Pro Ala
245 250 255

Pro Val Leu Pro Ser Arg Asp Asn Glu Ile Val Asp Ser Ala Ser
260 265 270

Val Pro Glu Thr Pro Leu Asp Cys Glu Val Ser Leu Trp Ser Ser
275 280 285

Trp Gly Leu Cys Gly Gly His Cys Gly Arg Leu Gly Thr Lys Ser
290 295 300

Arg Thr Arg Tyr Val Arg Val Gln Pro Ala Asn Asn Gly Ser Pro
305 310 315

Cys Pro Glu Leu Glu Glu Glu Ala Glu Cys Val Pro Asp Asn Cys
320 325 330

Val

<210> 9

<211> 747

<212> PRT

<213> Homo Sapien

<400> 9

Met Gly Val Trp Leu Asn Lys Asp Asp Tyr Ile Arg Asp Leu Lys
1 5 10 15

Arg Ile Ile Leu Cys Phe Leu Ile Val Tyr Met Ala Ile Leu Val
20 25 30

Gly Thr Asp Gln Asp Phe Tyr Ser Leu Leu Gly Val Ser Lys Thr
35 40 45

Ala Ser Ser Arg Glu Ile Arg Gln Ala Phe Lys Lys Leu Ala Leu
50 55 60

Lys Leu His Pro Asp Lys Asn Pro Asn Asn Pro Asn Ala His Gly
65 70 75

Asp Phe Leu Lys Ile Asn Arg Ala Tyr Glu Val Leu Lys Asp Glu
80 85 90

Asp Leu Arg Lys Lys Tyr Asp Lys Tyr Gly Glu Lys Gly Leu Glu
95 100 105

Asp Asn Gln Gly Gly Gln Tyr Glu Ser Trp Asn Tyr Tyr Arg Tyr
110 115 120

Asp Phe Gly Ile Tyr Asp Asp Asp Pro Glu Ile Ile Thr Leu Glu
125 130 135

Arg Arg Glu Phe Asp Ala Ala Val Asn Ser Gly Glu Leu Trp Phe
140 145 150

Val Asn Phe Tyr Ser Pro Gly Cys Ser His Cys His Asp Leu Ala
155 160 165

Pro Thr Trp Arg Asp Phe Ala Lys Glu Val Asp Gly Leu Leu Arg
170 175 180

Ile Gly Ala Val Asn Cys Gly Asp Asp Arg Met Leu Cys Arg Met
185 190 195

Lys Gly Val Asn Ser Tyr Pro Ser Leu Phe Ile Phe Arg Ser Gly
200 205 210

Met Ala Pro Val Lys Tyr His Gly Asp Arg Ser Lys Glu Ser Leu
215 220 225

Val Ser Phe Ala Met Gln His Val Arg Ser Thr Val Thr Glu Leu
230 235 240

Trp Thr Gly Asn Phe Val Asn Ser Ile Gln Thr Ala Phe Ala Ala
245 250 255

Gly Ile Gly Trp Leu Ile Thr Phe Cys Ser Lys Gly Gly Asp Cys
260 265 270

Leu Thr Ser Gln Thr Arg Leu Arg Leu Ser Gly Met Leu Phe Leu
275 280 285

Asn Ser Leu Asp Ala Lys Glu Ile Tyr Leu Glu Val Ile His Asn
290 295 300

Leu Pro Asp Phe Glu Leu Leu Ser Ala Asn Thr Leu Glu Asp Arg
305 310 315

Leu Ala His His Arg Trp Leu Leu Phe Phe His Phe Gly Lys Asn
320 325 330

Glu Asn Ser Asn Asp Pro Glu Leu Lys Lys Leu Lys Thr Leu Leu
335 340 345

Lys Asn Asp His Ile Gln Val Gly Arg Phe Asp Cys Ser Ser Ala
350 355 360

Pro Asp Ile Cys Ser Asn Leu Tyr Val Phe Gln Pro Ser Leu Ala
365 370 375

Val Phe Lys Gly Gln Gly Thr Lys Glu Tyr Glu Ile His His Gly
380 385 390

Lys Lys Ile Leu Tyr Asp Ile Leu Ala Phe Ala Lys Glu Ser Val
395 400 405

Asn Ser His Val Thr Thr Leu Gly Pro Gln Asn Phe Pro Ala Asn
410 415 420

Asp Lys Glu Pro Trp Leu Val Asp Phe Phe Ala Pro Trp Cys Pro
425 430 435

Pro Cys Arg Ala Leu Leu Pro Glu Leu Arg Arg Ala Ser Asn Leu
440 445 450

Leu Tyr Gly Gln Leu Lys Phe Gly Thr Leu Asp Cys Thr Val His
455 460 465

Glu Gly Leu Cys Asn Met Tyr Asn Ile Gln Ala Tyr Pro Thr Thr
470 475 480

Val Val Phe Asn Gln Ser Asn Ile His Glu Tyr Glu Gly His His
485 490 495

Ser Ala Glu Gln Ile Leu Glu Phe Ile Glu Asp Leu Met Asn Pro
500 505 510

Ser Val Val Ser Leu Thr Pro Thr Thr Phe Asn Glu Leu Val Thr
515 520 525

Gln Arg Lys His Asn Glu Val Trp Met Val Asp Phe Tyr Ser Pro
530 535 540

Trp Cys His Pro Cys Gln Val Leu Met Pro Glu Trp Lys Arg Met
545 550 555

Protein Data Bank

Ala Arg Thr Leu Thr Gly Leu Ile Asn Val Gly Ser Ile Asp Cys
560 565 570

Gln Gln Tyr His Ser Phe Cys Ala Gln Glu Asn Val Gln Arg Tyr
575 580 585

Pro Glu Ile Arg Phe Phe Pro Pro Lys Ser Asn Lys Ala Tyr Gln
590 595 600

Tyr His Ser Tyr Asn Gly Trp Asn Arg Asp Ala Tyr Ser Leu Arg
605 610 615

Ile Trp Gly Leu Gly Phe Leu Pro Gln Val Ser Thr Asp Leu Thr
620 625 630

Pro Gln Thr Phe Ser Glu Lys Val Leu Gln Gly Lys Asn His Trp
635 640 645

Val Ile Asp Phe Tyr Ala Pro Trp Cys Gly Pro Cys Gln Asn Phe
650 655 660

Ala Pro Glu Phe Glu Leu Leu Ala Arg Met Ile Lys Gly Lys Val
665 670 675

Lys Ala Gly Lys Val Asp Cys Gln Ala Tyr Ala Gln Thr Cys Gln
680 685 690

Lys Ala Gly Ile Arg Ala Tyr Pro Thr Val Lys Phe Tyr Phe Tyr
695 700 705

Glu Arg Ala Lys Arg Asn Phe Gln Glu Glu Gln Ile Asn Thr Arg
710 715 720

Asp Ala Lys Ala Ile Ala Ala Leu Ile Ser Glu Lys Leu Glu Thr
725 730 735

Leu Arg Asn Gln Gly Lys Arg Asn Lys Asp Glu Leu
740 745

<210> 10

<211> 206

<212> PRT

<213> Homo Sapien

<400> 10

Met Ala Gln Gln Ala Cys Pro Arg Ala Met Ala Lys Asn Gly Leu
1 5 10 15

Val Ile Cys Ile Leu Val Ile Thr Leu Leu Leu Asp Gln Thr Thr
20 25 30

Ser His Thr Ser Arg Leu Lys Ala Arg Lys His Ser Lys Arg Arg
35 40 45

Val Arg Asp Lys Asp Gly Asp Leu Lys Thr Gln Ile Glu Lys Leu
50 55 60

Trp Thr Glu Val Asn Ala Leu Lys Glu Ile Gln Ala Leu Gln Thr
65 70 75

Val Cys Leu Arg Gly Thr Lys Val His Lys Lys Cys Tyr Leu Ala
80 85 90

Ser Glu Gly Leu Lys His Phe His Glu Ala Asn Glu Asp Cys Ile
95 100 105

Ser Lys Gly Gly Ile Leu Val Ile Pro Arg Asn Ser Asp Glu Ile
110 115 120

Asn Ala Leu Gln Asp Tyr Gly Lys Arg Ser Leu Pro Gly Val Asn
125 130 135

Asp Phe Trp Leu Gly Ile Asn Asp Met Val Thr Glu Gly Lys Phe
140 145 150

Val Asp Val Asn Gly Ile Ala Ile Ser Phe Leu Asn Trp Asp Arg
155 160 165

Ala Gln Pro Asn Gly Gly Lys Arg Glu Asn Cys Val Leu Phe Ser
170 175 180

Gln Ser Ala Gln Gly Lys Trp Ser Asp Glu Ala Cys Arg Ser Ser
185 190 195

Lys Arg Tyr Ile Cys Glu Phe Thr Ile Pro Lys
200 205